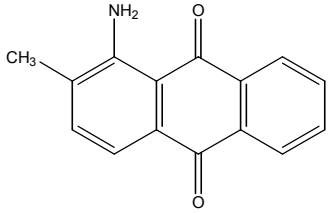
1-AMINO-2-METHYLANTHRAQUINONE
CAS No. 82-28-0
First Listed in the *Third Annual Report on Carcinogens*



CARCINOGENICITY

1-Amino-2-methylanthraquinone is *reasonably anticipated to be a human carcinogen* based on sufficient evidence of carcinogenicity in experimental animals. Technical-grade 1-amino-2-methylanthraquinone, administered in the feed, induced hepatocellular carcinomas in rats of both sexes, and kidney carcinomas in males. The compound induced an increased combined incidence of hepatocellular carcinomas and neoplastic nodules in female mice (NCI 111, 1978). An IARC Working Group considered that the evidence for the carcinogenicity of 1-amino-2-methylanthraquinone in experimental animals was limited (IARC V.27, 1982). In view of a NCI/OTA correlative interpretation, the evidence may be regarded as sufficient (Griesemer and Cueto, 1980; OTA, 1981; IARC S.7, 1987).

There are no adequate data available to evaluate the carcinogenicity of 1-amino-2-methylanthraquinone in humans (IARC V.27, 1982).

PROPERTIES

1-Amino-2-methylanthraquinone occurs as an orange crystalline solid that is insoluble in water; slightly soluble in carbon tetrachloride; and soluble in ethanol, acetone, ethylene glycol monoethyl ether, linseed oil, and benzene. When heated to decomposition, it emits toxic fumes of nitrogen oxides (NO_x).

USE

1-Amino-2-methylanthraquinone is an industrial chemical used almost exclusively as a dye intermediate for the production of a variety of anthraquinone dyes, although none of these dyes is presently produced in commercial quantities (IARC V.27, 1982). The Society of Dyers and Colourists reported in 1971 that 1-amino-2-methylanthraquinone was used as a dye for a variety of synthetic fibers, especially acetates, as well as wool, sheepskins, and furs, and for the surface dyeing of thermoplastics (Colour Index, 1971).

PRODUCTION

1-Amino-2-methylanthraquinone is not produced commercially in the United States (HSDB, 1997). Production was last reported by one company in 1970, although it has been produced in the United States since 1948 (IARC V.27, 1982). *Chemcyclopedia 98* and the 1998

Chemical Buyers Directory indicate no suppliers of the compound (Rodnan, 1997; Tilton, 1997). There are also no indications that it is currently imported into the country. The 1979 TSCA Inventory identified two importers of the chemical in 1977, and the CBI Aggregate was less than 1 million lb (TSCA, 1979). In 1972, imports of 1-amino-2-methylanthraquinone through the principal U.S. customs districts amounted to only 260 lb (IARC V.27, 1982).

EXPOSURE

The primary routes of potential human exposure to 1-amino-2-methylanthraquinone are inhalation and dermal contact. The potential for occupational exposure is greatest among workers engaged in the dyeing of textiles. The National Occupational Hazard Survey, conducted by NIOSH from 1972 to 1974, reported no information on 1-amino-2-methylanthraquinone alone, but estimated that 6,400 workers have possibly been exposed to anthraquinone dyes (NIOSH, 1976). According to CPSC, 1-amino-2-methylanthraquinone is not presently used in consumer products.

REGULATIONS

EPA regulates 1-amino-2-methylanthraquinone under the Superfund Amendments and Reauthorization Act (SARA); general threshold amounts have been set for this compound. OSHA regulates 1-amino-2-methylanthraquinone as a chemical hazard in laboratories under the Hazard Communication Standard. Regulations are summarized in Volume II, Table B-8.